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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,548	10/12/2001	Heikki Suonsivu	P 280414 2010740US/VK/kop	7503
909 7590 04/16/2007 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102			EXAMINER KIM, KEVIN	
			ART UNIT	PAPER NUMBER
			2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/975,548

Applicant(s)

SUONSIVU ET AL.

Examiner

Kevin Y. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a notice of appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on February 1, 2007 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1,3-10,13,14 are rejected under 35 U.S.C. 102(e) as being anticipated by Palm (US 2002/0041572).

#### **Claim 1.**

Palm discloses a method for conveying information between a data network (102) and a subscriber's transceiver unit (106), the method comprising:

using at least one Very-high-data-rate Digital Subscriber Line, VDSL, downlink frequency band to convey information from the data network to a personal computer (114) via the subscriber's transceiver unit (see paragraph [0044] teaching the user device includes a personal computer); and

using at least one non-VDSL uplink frequency band ("the VDSL optional band" as defined by Palm) to convey information from a personal computer via the subscriber's

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transceiver unit (114) to the data network (102), wherein the at least one non-VDSL uplink frequency band is located below 138 kHz. See Figs.2 and 3, and related descriptions, teaching the use of a non-VDSL frequency band located below 138 kHz.

Claim 3.

Palm teaches negotiating the use of a non-VDSL frequency band located below 138 kHz. See Figs.2 and 3, and Table 1 showing the use of the frequency band located below 138 kHz concurrently with the upstream frequency bands of 3750-5200 kHz and 8500-12000 kHz.

Claim 4.

Palm teaches negotiating by the subscriber's transceiver unit, with its peer entity to determine whether at least one VDSL uplink band is usable. See paragraphs [0051] – [0054].

Claim 5.

Palm discloses a transceiver unit (106) for Very-high-data-rate Digital Subscriber Line, VDSL, communication to/from a data network (102), comprising:

downlink filter means for conveying information from the data network to a personal computer via the subscriber's transceiver unit using at least one Very-high-data-rate Digital Subscriber Line, or VDSL, downlink frequency band; and

uplink filter means for conveying information from a personal computer via the subscriber's transceiver unit to the data network using at least one non-VDSL uplink frequency band, wherein the at least one non-VDSL uplink frequency band is located below 138 kHz. See

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Figs.2 and 3, and related descriptions, teaching the use of a non-VDSL frequency band located below 138 kHz.

Although the filters are not shown, they are required to separate transmit information on given frequency bands.

Claim 6.

Palm teaches negotiating the use of a non-VDSL frequency band located below 138 kHz in addition to a VDSL uplink frequency band. See Figs.2 and 3, and Table 1 showing the use of the frequency band located below 138 kHz concurrently with the upstream frequency bands of 3750-5200 kHz and 8500-12000 kHz.

Claims 7 and 10.

For transmission signals on the implementing the non-VDSL uplink frequency band, an uplink bandstop filter is needed to filter out not used frequencies.

Claims 8 and 9.

In order to transmit signals on the non-VDSL uplink band a first bandpass filter is needed to limit the frequencies within that the non-VDSL uplink band, i.e., a bandpass filter having bandwidth of 25kHz to 138 kHz. Likewise, in order to transmit signals on the VDSL uplink band, at least one second bandpass filter is needed, i.e., bandpass filters having bandwidth of 3750-5200 kHz and 8500-12000 kHz.

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Claim 13.

The non-VDSL uplink frequency band has an upper limit of approximately 138 kHz since the non-VDSL is between 25 kHz and 138 kHz, as shown in Fig.2.

Claim 14.

Palm teaches negotiating by the subscriber's transceiver unit, with its peer entity to determine whether at least one VDSL uplink band is usable. See paragraphs [0051] – [0054].

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 2 and, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palm (US 2002/0041572) as applied to claims 1 and 10 above.

Claim 2.

Palm fails to teach using the non-VDSL uplink band ***only when*** the VDSL bands are not usable. However, when to use the non-VDSL uplink band would have been an obvious matter of design choice since the non-VDSL uplink band is optional.

Claims 11 and 12.

Palm discloses all the subject matter claimed but for the transceiver further comprising “a switchable high-pass filter in series with the bandstop filter,” and the bandstop filter comprising “at least one switchable coil.” It is known in the art various designs are available to suit needs of a particular filtering requirement. Thus, it would have been obvious matter of design choice

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to construct the filter in a multi-filter fashion using another filter in series or using a switchable coil, i.e., an inductor, an essential element in a bandpass filter.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hjartarson et al (US 2002/0027900) teaches the use of programmable filters for filtering frequency bands to separate transmission channels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 5, 2007

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KEVIN KIM  
PRIMARY PATENT EXAMINER

